Texas State Soil and Water Conservation Board
EPA Multipurpose Grant
FY 2020 Workplan MPG-01

SUMMARY PAGE						
Title of Project	Pond Creek Watershed Monitoring and Assessment					
Project Goals	• Supplement existing water data through targeted sample collection • Evaluate existing water quality trends					
Project Tasks	(1) Project Administration; (2) Quality Assurance; (3) Summarize Existing Data; and (4) Supplemental Monitoring					
Measures of Success	• Collection and analysis of existing data • Collection and analysis of quality-assured data					
Project Type	Implementation ( ); Education ( ); Planning ( ); Assessment (X); Groundwater ( )					
Status of Waterbody on *2014 Texas Integrated Report*	Segment ID 1242F		Parameter of Impairment or Concern Bacteria		Category 5b	
Project Location (Statewide or Watershed and County)	Perennial stream from the confluence with the Brazos River in Milam County up to the confluence with Live Oak Creek in Falls County.					
Key Project Activities	Hire Staff ( ); Surface Water Quality Monitoring (X); Technical Assistance ( ); Education (); Implementation ( ); BMP Effectiveness Monitoring ( ); Demonstration ( ); Planning (); Modeling ( ); Bacterial Source Tracking ( ); Other ( )					
2017 Texas NPS Management Program Reference	• Component 1: LTG 1, 2 • Component 1: STG 1A, 1B • Component 3, 7					
Project Costs	Federal	$101,772	Non-Federal	$0	Total	$101,772
Project Management	• Texas A&M AgriLife Research, Texas Water Resources Institute					
Project Period	January 1, 2020 – December 31, 2022					

Part I – Applicant Information

Applicant							
Project Lead	T. Allen Berthold, Ph.D.						
Title	Senior Research Scientist						
Organization	Texas A&M AgriLife Research, Texas Water Resources Institute						
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City	College Station	County	Brazos	State	TX	Zip Code	77843
Telephone Number	979-845-2028			Fax Number	979-845-0662		

Project Partners	
Names	Roles & Responsibilities
Texas State Soil and Water Conservation Board (TSSWCB)	Provide state oversight and management of all project activities and ensure coordination of activities with related projects and TCEQ.

Texas A&M AgriLife Research, Texas Water Resources Institute (TWRI)	Provide project oversight and reporting, QA/QC, conduct water sample collection and analysis.

Part II – Project Information

Project Type							
Surface Water	X	Groundwater					
Does the project implement recommendations made in: (a) a completed WPP; (b) an adopted TMDL; (c) an approved I-Plan; (d) a Comprehensive Conservation and Management Plan developed under CWA §320; (e) the *Texas Coastal NPS Pollution Control Program*; or (f) the *Texas Groundwater Protection Strategy*?				Yes		No	X
If yes, identify the document.	N/A						
If yes, identify the agency/group that developed and/or approved the document.	N/A			Year Developed	N/A		

Watershed Information				
Watershed or Aquifer Name(s)	Hydrologic Unit Code (12 Digit)	Segment ID	Category on 2014 IR	Size (Acres)
Pond Creek	120701010401 - …0405	1242F	5b	146,758

Water Quality Impairment

Describe all known causes (i.e., pollutants of concern) and sources (e.g., agricultural, silvicultural) of water quality impairments or concerns from any of the following sources: *2016 Texas Integrated Report,* Clean Rivers Program Basin Summary/Highlights Reports, or other documented sources.

Impairments (2016 Integrated Report)

Segment 1242F: Pond Creek: Perennial stream from the confluence with the Brazos River in Milam County upstream to the headwaters 0.18 km north of F 935 in Bell County

Assessment Unit	Impairment	Category	Year Listed
1242F_01	*bacteria*	*5b*	*2010*

Potential Sources: Unknown

Project Narrative

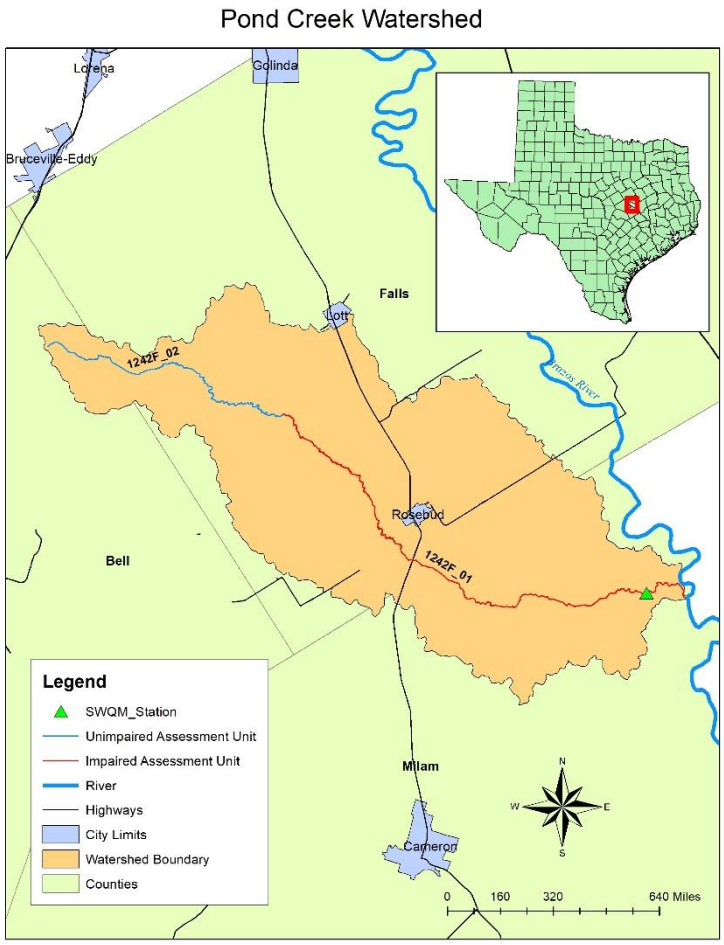
Problem/Need Statement

Water quality in Pond Creek currently exceeds recreational use standards and, as a result, a Recreational Use Attainability Analysis was conducted in 2012. The report shows that primary contact recreation occurs "frequently" on the waterbody (Tables 4 & 7: https://www.tceq.texas.gov/assets/public/waterquality/standards/ruaa/brazos5/Brazos5Report.pdf) indicating that standards will not change.

Efforts to address this impairment are needed and can include additional water quality monitoring data collection or watershed based plan development. No water quality data was collected on this water body between 2008 and 2015 and only resumed in 2016 at a single location; however, sufficient data to fully assess the bacteria impairment will not be available until the *2024 Texas Integrated Report* is developed. If the impaired status is confirmed with recently collected *E. coli* concentrations, remedial action through development of a watershed based plan will be necessary. However, flow volume is not currently recorded on this stream making load duration curve (LDC) development more difficult. LDCs are a cornerstone of watershed-based plans in this type of watershed and having actual flow data to base them on is paramount. Additionally, expanded data collection will allow for more accurate assessment of waterbody conditions and aid in identifying potential causes and sources of pollution. It is through monitoring and adequate data that watershed managers will be able to get a true assessment of water quality and water quality inhibitors. To fully understand and appreciate the scope of the impairment, it is imperative that monthly sampling occurs at more than one location within the watershed.

Project Narrative

General Project Description (Include Project Location Map)



Through this project, supplemental water quality monitoring will be conducted with a focus on collecting paired flow rate and *E. coli* concentration data. Data will be collected at up to two sites monthly including TCEQ monitoring station 16406 and a yet-to-be-determined location upstream. Monthly sampling will allow data gaps to be filled and will improve watershed analysis.

Additionally, existing water quality data collected through the Texas Clean Rivers Program will be retrieved and summarized in conjunction with data generated through this project. Existing water quality findings and trends will be discussed. Such data is crucial in understanding bacterial loads throughout the watershed, and can be used in future LDC development and loading reduction estimates.

Tasks, Objectives and Schedules						
Task 1	Project Administration					
Costs	Federal	$15,265	Non-Federal	$0	Total	$15,265
Objective	To effectively administer, coordinate, and monitor all work performed under this project including technical and financial supervision, and preparation of status reports.					
Subtask 1.1	TWRI will prepare electronic quarterly progress reports (QPRs) for submission to the TSSWCB. QPRs shall document all activities performed within a quarter and shall be submitted by the 1st of January, April, July and October. QPRs shall be distributed to all Project Partners.					
	Start Date	Month 1	Completion Date	Month 36		
Subtask 1.2	TWRI will perform accounting functions for project funds and will submit appropriate Reimbursement Forms to TSSWCB at least quarterly.					
	Start Date	Month 1	Completion Date	Month 36		
Subtask 1.3	TWRI will host coordination meetings or conference calls, at least quarterly, with Project Partners to discuss project activities, project schedule, communication needs, deliverables, and other requirements. TWRI will develop lists of action items needed following each project coordination meeting and distribute to project personnel.					
	Start Date	Month 1	Completion Date	Month 36		
Subtask 1.4	TWRI will develop a Final Report that summarizes activities completed and conclusions reached during the project and discusses the extent to which project goals and measures of success have been achieved.					
	Start Date	Month 1	Completion Date	Month 36		
Deliverables	• QPRs in electronic format • Reimbursement Forms and necessary documentation in hard copy format • Final Report in electronic and hard copy formats					

Tasks, Objectives and Schedules						
Task 2	Quality Assurance					
Costs	Federal	$4,071	Non-Federal	$0	Total	$4,071
Objective	To develop data quality objectives (DQOs) and quality assurance/control (QA/QC) activities to ensure data of known and acceptable quality are generated through this project.					
Subtask 2.1	TWRI will develop a QAPP for activities in Tasks 3 and 4 consistent with the most recent versions of *EPA Requirements for Quality Assurance Project Plans (QA/R-5)* and the *TSSWCB Environmental Data Quality Management Plan*. All monitoring procedures and methods prescribed in the QAPP shall be consistent with the guidelines detailed in the *TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue (RG-415)* and *Volume 2: Methods for Collecting and Analyzing Biological Assemblage and Habitat Data (RG-416)*. [Consistency with Title 30, Chapter 25 of the Texas Administrative Code, *Environmental Testing Laboratory Accreditation and Certification*, which describes Texas' approach to implementing the National Environmental Laboratory Accreditation Conference (NELAC) standards, shall be required where applicable.]					
	Start Date	Month 1	Completion Date	Month 6		
Subtask 2.2	TWRI will implement the approved QAPP. TWRI will submit revisions and necessary amendments to the QAPP as needed.					
	Start Date	Month 1	Completion Date	Month 6		
Deliverables	• QAPP approved by TSSWCB and EPA in both electronic and hard copy formats • Approved revisions and amendments to QAPP, as needed • Data of known and acceptable quality as reported through Tasks 3 and 4					

Tasks, Objectives and Schedules						
Task 3	Summary of Existing Data					
Costs	Federal	$16,284	Non-Federal	$0	Total	$16,284
Objective	Collect and summarize existing water quality data within the watershed					
Subtask 3.1	TWRI will gather existing surface water quality data and information pertaining to surface water quality within the watershed					
	Start Date	Month 1	Completion Date	Month 12		
Subtask 3.2	TWRI will inventory and summarize the data to be used in the final project report.					
	Start Date	Month 1	Completion Date	Month 12		
Deliverables	Inventory of available surface water quality data.					

Tasks, Objectives and Schedules						
Task 4	Supplemental Monitoring for Watershed Characterization					
Costs	Federal	$66,152 $65,014	Non-Federal	$0 $43	Total	$66,152 $108,
Objective	To collect surface water quality and flow data					
Subtask 5.1	Site Selection – TWRI will conduct sampling site reconnaissance to determine the suitability of sample collection that will best help characterize the watershed. Once site selection has been finalized, those needing TCEQ station numbers will be submitted for a Station Location request (SLOC request).					
	Start Date	Month 1	Completion Date	Month 3		
Subtask 5.2	Water Quality Monitoring – Upon QAPP approval, TWRI will conduct monthly ambient water quality monitoring. Sampling will include basic field parameters (temperature, pH, DO, conductivity, and flow where conditions allow) and grab sample collection. Water samples will be delivered to a NELAP accredited laboratory within the appropriate holding time for bacterial analysis.					
	Start Date	Month 3	Completion Date	Month 32		
Subtask 5.3	Water Quality Data Submission – TWRI, will maintain a master database of collected water quality data. Data will be submitted to TSSWCB by TWRI for submission to SWQMIS on a quarterly basis.					
	Start Date	Month 1	Completion Date	Month 36		
Deliverables	• Site selection and SLOC requests (if needed) • Documentation of sampling events in QPRs • SWQMIS data submissions (Data sets, Data Review Checklists)					

Project Goals (Expand from Summary Page)
TWRI will acquire and summarize existing surface water quality data from the watershed. Existing data will be supplemented through monthly water quality monitoring at sites identified through from site recon and the QAPP. New data will be submitted to SWQMIS. Existing and new data will be summarized and analyzed in the project final report to evaluate water quality trends.

Measures of Success (Expand from Summary Page)
This project will be considered successful upon collection of 2 years' worth of monthly ambient water quality data and assessment of this newly generated data combined with existing data.

***2017 Texas NPS Management Program* Reference (Expand from Summary Page)**
Components, Goals, and Objectives
Component 1: Explicit short- and long-term goals, objectives … that protect surface and groundwater. o LTG 1: Focus NPS abatement efforts, implementation strategies, and available resources in watersheds identified as impacted by nonpoint source pollution o LTG 2: Support the implementation of state, regional and local programs to prevent NPS pollution through assessment, implementation and education o STG 1: Data Collection and Assessment: coordinate with appropriate federal, state, regional, and local entities…. Where additional information may be needed o Objective A: Identify surface water bodies … that need additional information to characterize non-attainment of designated uses and water quality standards o Objective B: ensure that monitoring procedures meet quality assurance requirements ….or TSSWCB Quality Management Plans
Component 3: Combination of statewide nonpoint source programs and on-the-ground projects achieve water quality benefits; efforts are well-integrated with other relevant state and federal programs.
Component 7: Manage and implement the NPS program efficiently and effectively, including necessary financial management.

Estimated Load Reductions Expected (Only applicable to Implementation Project Type)
Loading reductions are not anticipated to result from this project.

EPA State Categorical Program Grants – Workplan Essential Elements FY 2018-2022 EPA Strategic Plan Reference
Strategic Plan Goal – Goal 1 Core Mission
Strategic Plan Objective – Objective 1.2 Provide for Clean and Safe Water

Part III – Financial Information

Budget Summary				
Federal	$	101,772	% of total project	100%
Non-Federal	$	0	% of total project	0%
Total	$	101,772	Total	100%

Category	Federal	Non-Federal	Total
Personnel	$ 65,369	$ 0	$ 65,369
Fringe Benefits	$ 19,463	$ 0	$ 19,463
Travel	$ 1,392	$ 0	$ 1,392
Equipment	$ 0	$ 0	$ 0
Supplies	$ 156	$ 0	$ 156
Contractual	$ 0	$ 0	$ 0
Construction	$ 0	$ 0	$ 0
Other	$ 2,118	$ 0	$ 2,118
Total Direct Costs	$ 88,498	$ 0	$ 88,498
Indirect Costs (≤ 15%)	$ 13,274	$ 0	$ 13,274
Total Project Costs	$ 101,772	$ 0	$ 101,772

Budget Justification (Federal)		
Category	Total Amount	Justification
Personnel	$ 65,369	Research Associate: $50,692 annually @ 6 months ($26,897) Research Assistant: $45,000 annually @ 2.23 months ($8,624) Program Manager: $59,064 annually @ 1.5 months ($7,595) Graduate Student: $54,000 annually @ (50% max per year as grad students are only part-time) @ 4.8 months ($22,253) *named positions are budgeted with a 3% annual pay increase in all years; TBD positions are budgeted with a 3% pay increase in years after year 1 *Salary estimates are based on average monthly percent effort for the entire contract. Actual percent effort may vary more or less than estimated between months; but in aggregate, will not exceed total effort estimates for the entire project.
Fringe Benefits	$ 19,463	Fringe for faculty and staff is calculated at 18.2% salary plus $746 per month. Fringe for students is calculated at 10.7% salary plus $412 per month. *Fringe benefits estimates are based on salary estimates listed. Actual fringe benefits will vary between months coinciding with percent effort variations; but in aggregate, will not exceed the overall estimated total.
Travel	$ 1,392	Mileage for water quality monitoring estimated at 24 trips, 116 miles round trip per trip @ $0.50 per mile for state vehicles
Equipment	$ 0	N/A
Supplies	$ 156	Supplies including, but not limited to, sampling supplies and consumables; general office supplies
Contractual*	$ 0	N/A
Construction	$ 0	N/A
Other	$ 2,118	Lab analysis for samples for 2 sites at 24 sampling events at $41 per sample ($1,968) Software Licenses ($150)
Indirect	$ 13,274	Texas A&M AgriLife Research's federally-negotiated indirect cost rate (IDC) is 51.5% of modified total direct costs (MTDC). Per the limitations of this RFP, indirect costs are limited at 15% total direct costs. $88,498 * 0.15